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Two New Species of The Ant Genus *Polyrhachis* F. Smith (Hymenoptera: Formicidae) From Guangxi, South of China

ZHOU Shanyi HUANG Jianhua

(Department of Biology, Guangxi Normal University, Guilin, Guangxi 541004, CN E-mail: syzhou@mailbox.gxnu.edu.cn)

Abstract Two new species of the ant genus *Polyrhachis* F. Smith, i.e. *P. zhengi* sp. nov. and *P. cornuhumera* sp. nov., collected from Guangxi, south of China, were described in this paper.

Key words Hymenoptera, Formicidae, *Polyrhachis*, new species

Polyrhachis F. Smith is a large genus in the family Formicidae. 477 species have been described in the world according to Dr. Bolton (1995). In China, Wang et al. (1991), Wu et al. (1995), Tang et al. (1995) studied the genus and treated 29 species, Xu (2001) described 2 species from Yunnan Province.

Guangxi is one of the regions in which the biodiversity are richest in China. Zhou et al. (1997), Zhou (2001) studied *Polyrhachis* and recorded 13 species. When we made a biodiversity survey on Shi Wan Da Shan Natural Conserve, 2 new species of the genus were found. The descriptions of them are as below.

Measurements and indices are as defined in Bolton (1975). Total length-TL, Head width-HW, Head Length-HL, Cephalic index-CI ($=HW \times 100 / HL$), Scape length-SL, Scape index-SI ($=SL \times 100 / HW$), Pronotal width-PW, Alitrunk length-AL. All the measurements are expressed in millimeters, the indices are percentages.

The type specimens are deposited in the Insect Collection, the Department of Biology, Guangxi Normal University, Guangxi Automatic Region, Guilin, China.

***Polyrhachis zhengi* sp. nov. (figs. 1~3)**

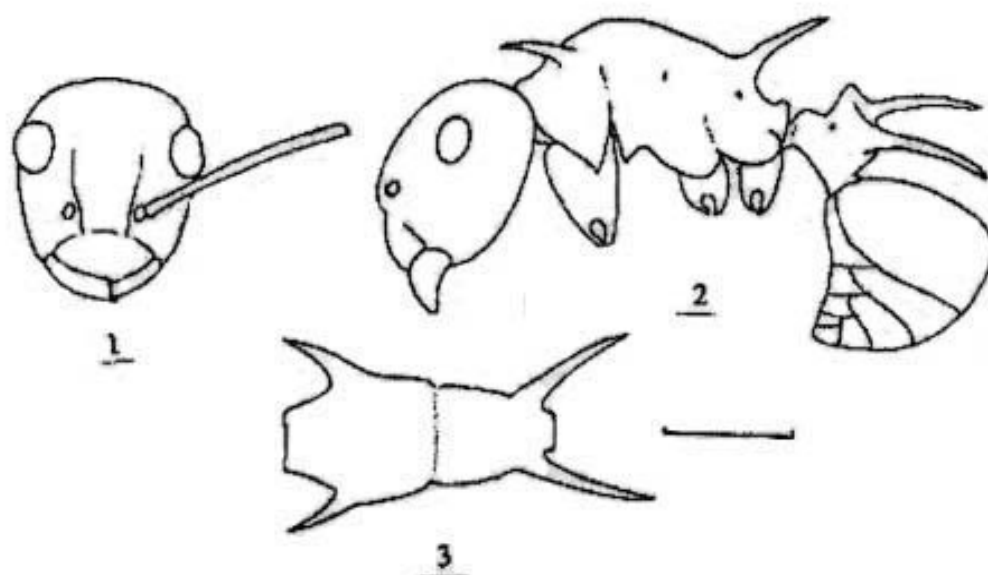
Holotype worker: TL 5.9, HW 1.25, HL 1.48, CI 84, SL 1.6, SI 128, PW 0.88, AL 2.0. Head nearly oval, broader posteriorly than in front. Occipital border convex. Eyes large, situated behind the midlength of the sides of the head. Clypeus convex, anterior border slightly advanced in the middle, without central carina. Mandible with 5 teeth. Dorsum of alitrunk strongly arched in profile view, pro-mesonotal suture and meso-propodeal suture vanished in dorsal view. Pronotal spines (humeral spines) of moderate long, pointing lateroanteriorly. Propodeal spines longer than pronotal spines, pointing lateroposteriorly. The two pairs of spines of the alitrunk

slightly curved downwards in profile view. Anterior surface and posterior surface of the petiolar node parallel in profile view, armed with two long spines, pointing backwards the gaster, curved inwards in dorsal view, arched and without tooth nor denticle between the two long spines. Gaster oval. Head longitudinal rugose in vertex, smooth and shining at sides. Alitrunk and petiole coarsely alveolate. Gaster smooth and shining. Head, antennae, alitrunk, legs and petiole red; darker in vertex, at the border of mandibles and at the tips of the spines. Gaster black. Hairs fine and sparse, pubescence sparse on the dorsum of the head, alitrunk, petiole and gaster, abundant on the funicular segments, coxae and tarsi of the legs, and ventral surface of the gaster.

Paratype worker: TL 5.5, HL 1.19, HL 1.38, CI 86, SL 1.51, SI 127, PW 0.85, AL 1.88.

Holotype, Shi Wan Da Shan Natural Conserve, Guangxi Automatic Region, South of China, 27-IX-2000, Shanyi ZHOU leg. Paratype worker, data as noitype.

This new species resembles *P. thompson* Bingham, but differs from the later in alitrunk coarsely alveolate, petiolar node without tooth nor denticle between the two long spines, and body red except the gaster which is black. This new species named with Professor Zheng Zhemin for commemorating his 50-years teachinglife.



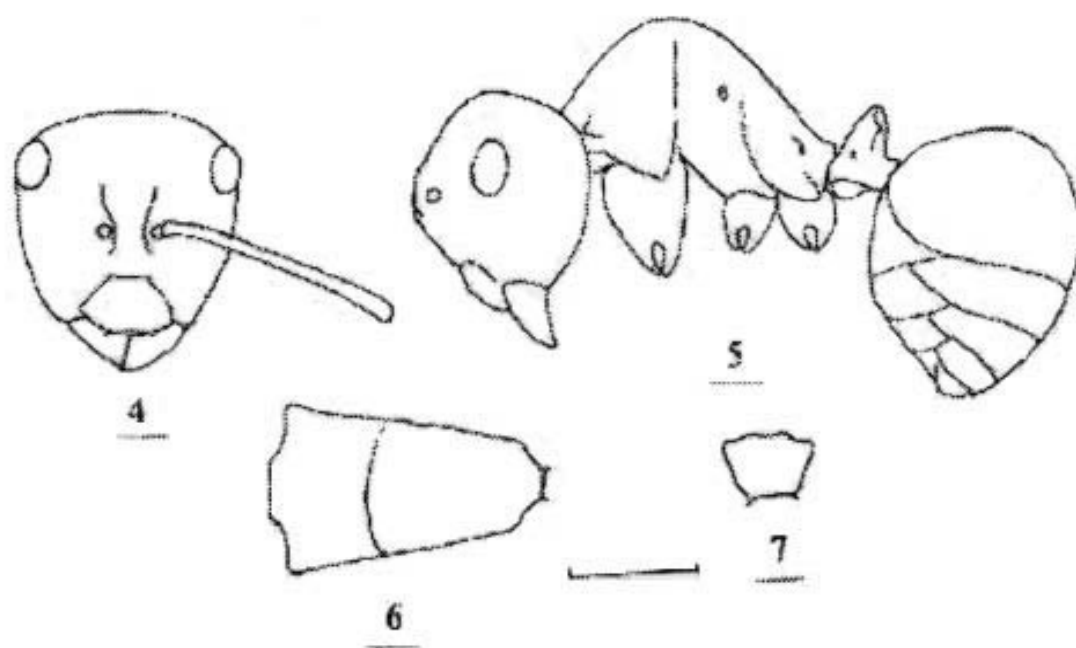
Figs 1 — 3 *Polyrhachis zhengi* sp. nov. worker

1. head in frontal view 2. body in profile view 3. alitrunk in dorsal view

***Polyrhachis cornuhumera* sp. nov. (figs. 4–7)**

Holotype worker: HW 1.57, HL 1.57, CI 100, SL 1.67, SI 106, PW 1.19, AL 1.88, TL 6.1. Head including mandibles subtriangular, broader posteriorly than in front. Occipital border slightly convex, ventral surface of the head marginate laterally along the whole length. Eyes situated nearly at the occipital corners. Mandible with 5 teeth. Clypeus without central carina, middle part of its anterior border marginate, with a pair of teeth laterally. In profile view, alitrunk strongly convex, sloped suddenly from mesonotum so that propodeum without basal surface. Propodeum without spines, with only a pair of very low and very indistinct tubercles laterally. In dorsal view, alitrunk trapezoid, broadest anteriorly, humeri projecting angularly. In profile view, petiolar node broad at base, acute at tip; In dorsal view, lateral angles prominent, without tooth nor denticle in the middle between lateral angles. Gaster oval. Head, alitrunk, node of peduncle and gaster shining, with delicate microreticulations. Hairs sparse, with 2 pairs on vertex of head, several in ventral surface of the gaster, absent in dorsum of the alitrunk, the petiole and the gaster. Pubescence very short and sparse. Color black, the middle and hind coxae, femora and tibiae of legs red.

Figs. 4-7 *Polyrhachis cornuhumera* sp. nov. worker



4. head in frontal view 5. body in profile view 6. alitrunk in dorsal view
7. node in dorsal view

Paratype workers: HW 1.57-1.76, HL 1.57-1.76, CI 100, SL 1.67-1.91, SI 106-119, PW 1.28-1.35, AL 1.88-2.10, TL 6.1-7.0 (3 individual measured).

Holotype worker: Shi Wan Da Shan Natural Conserve, Guangxi Automatic Region, South of China, 3-XII-2001, Jianhua HUANG leg. Paratype: 15 workers, data as holotype.

This new species is close to *P. rastellata* Latreille, but differs from the later in humeri projecting angularly, propodeum without tooth nor turbecele, and petiolar node lateral angles prominent but without tooth nor denticle between the two angles.

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广西多刺蚁属二新种 (膜翅目: 蚁科)

周善义 黄建华

(广西师范大学生物系, 桂林 541004 E-mail: syzhou@mailbox.gxnu.edu.cn)

摘要 记述来自广西壮族自治区的多刺蚁属二新种, 即郑氏多刺蚁 *P. zhengi* sp. nov. 和角胸多刺蚁 *P. cornuhumera* sp. nov.。郑氏多刺蚁与汤普森氏多刺蚁 *P. thompson* Bingham 相似, 但并腹胸具粗孔状刻纹, 结节两长刺间无刺或齿, 除后腹部黑色外, 体其余部分均为红色。角胸多刺蚁与结多刺蚁 *P. rastellata* Latreille 相似, 但肩部呈角形突出, 并胸腹节不具刺或齿, 结节两侧角形但中部不具刺或齿。

新种模式标本保存于广西师范大学生物系昆虫标本室。

郑氏多刺蚁以导师郑哲民教授姓氏命名, 以纪念他执教 50 周年。

关键词 膜翅目 蚁科 多刺蚁属 新种

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